

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended). A Schottky diode, comprising:

a semiconductor body having a top side;

a weakly-conductive doped well formed in said semiconductor body;

a metallic layer on said well for forming a Schottky junction with lateral edges delimiting said Schottky junction, said lateral edges being at least one of ~~longer than a straight edge~~, curved, ramified, and rimose;

said metallic layer being at least one layer selected from the group of thin layers consisting of:

a liner of a contact hole filling extending in a dielectric layer covering said top side,

a metal silicide layer, and

a liner on said metal silicide layer; and

a contact region being highly doped for a low-impedance contact connection and having a lateral boundary in said doped well ~~and~~, said lateral boundary having one of a lattice-shaped structure, a finger-shaped structure, a comb-shaped structure, an irregularly curved edge, a ramified edge, and a rimose edge.

Claim 2 (original). The Schottky diode according to claim 1, wherein said lateral edges of said Schottky junction and said lateral boundary of said highly doped contact region facing said Schottky junction have a constant distance therebetween.

Claim 3 (original). The Schottky diode according to claim 1, wherein said doped well is selected from the group consisting of a high-voltage n-type well and a high-voltage p-type well of a CMOS technology.

Claim 4 (original). The Schottky diode according to claim 1, further comprising:

a further doped well containing said doped well and being doped for an opposite sign of electrical conductivity than said doped well; and

a further highly doped contact region provided on said further doped well and having the same sign of conductivity as said further doped well.

Claim 5 (currently amended). The Schottky diode according to claim 1, wherein said metal ~~silicide~~ layer has a finger-shaped structure.

Claim 6 (currently amended). The Schottky diode according to claim 5, wherein said contact region is finger-shaped and is intermeshed in a comb-shaped manner with the metal ~~silicide~~ layer.

Claim 7 (currently amended). A Schottky diode, comprising:

a semiconductor body having a top side;

a dielectric layer covering said top side and having a contact hole formed therein;

a contact hole filling disposed in said contact hole;

a weakly-conductively doped well formed in said semiconductor body;

a metallic layer on said well for forming a Schottky junction with lateral edges delimiting said Schottky junction, said lateral edges being at least one of ~~longer than a straight edge~~, curved, ramified, and rimose, said metallic layer being selected from the group of layers consisting of:

a liner of said contact hole filling,

a metal silicide layer, and

a liner on said metal silicide layer; and

a contact region being highly doped for a low-impedance contact connection and having a lateral boundary in said doped well ~~and~~, said lateral boundary having one of a lattice-shaped structure, a finger-shaped structure, a comb-like structure, an irregularly curved edge, a ramified edge, and a rimose edge.